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ORIGINAL (Red)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

SUBJECT: Sampling at Dover Gas & Light Co. NPL Site
Dover, Delaware

DATE: AUG 15 1988

FROM: Leonard Nash
Enforcement Project Manager
DELMARVA/DC/WV CERCLA
Remedial Enforcement Section (3HW16)

TO: Robert G. Kramer, Chief
Environmental Management Branch (3ES10)
Environmental Services Division

Thru: Laura A. Boornazian, Chief
DELMARVA/DC/WV CERCLA
Remedial Enforcement Section (3HW16)

The Dover Gas Light Company hazardous waste site (DGL) is located in the city of Dover. There are 14 municipal supply wells located within one mile of the site; the nearest being only 1000 feet from the site boundary. The 1984 groundwater sampling at monitoring wells showed contamination by a number of priority pollutants. The nearest municipal well should be sampled to determine if the contaminants have migrated to the well. The background and the sampling requirements are summarized in the following paragraphs.

The Dover Gas Light Company was a coal gasification plant which operated from 1859 until 1948. Upon closure, the plant structures were demolished and buried on site. Test borings for construction on the site encountered tarry substances. Sampling of monitoring wells revealed contamination by coal gasification pyrolysis products including the following:

Benzene
Toluene
Xylene
Anthracene
Naphthalene

RECEIVED
AUG 19 1988
ENVIRONMENTAL MANAGEMENT BRANCH (3ES10)

AR100405

The DGL site is located in the center of Dover on the corner of South New Street and North (see enclosed map). The nearest well is the Dover Water Supply well No. 4 which is located 1000 feet southwest of the site on Water street (see enclosed map of water supply wells).

Although it appears unlikely that the water supply wells are contaminated, in order to be sure, we recommend that well No. 4 and well No. 9 of the Dover supply wells be sampled for the contaminants of concern, and request that ESD do the sampling.

If you have any questions or want to review the file, please contact me at extension 0978.

Attachments

FIGURE 6

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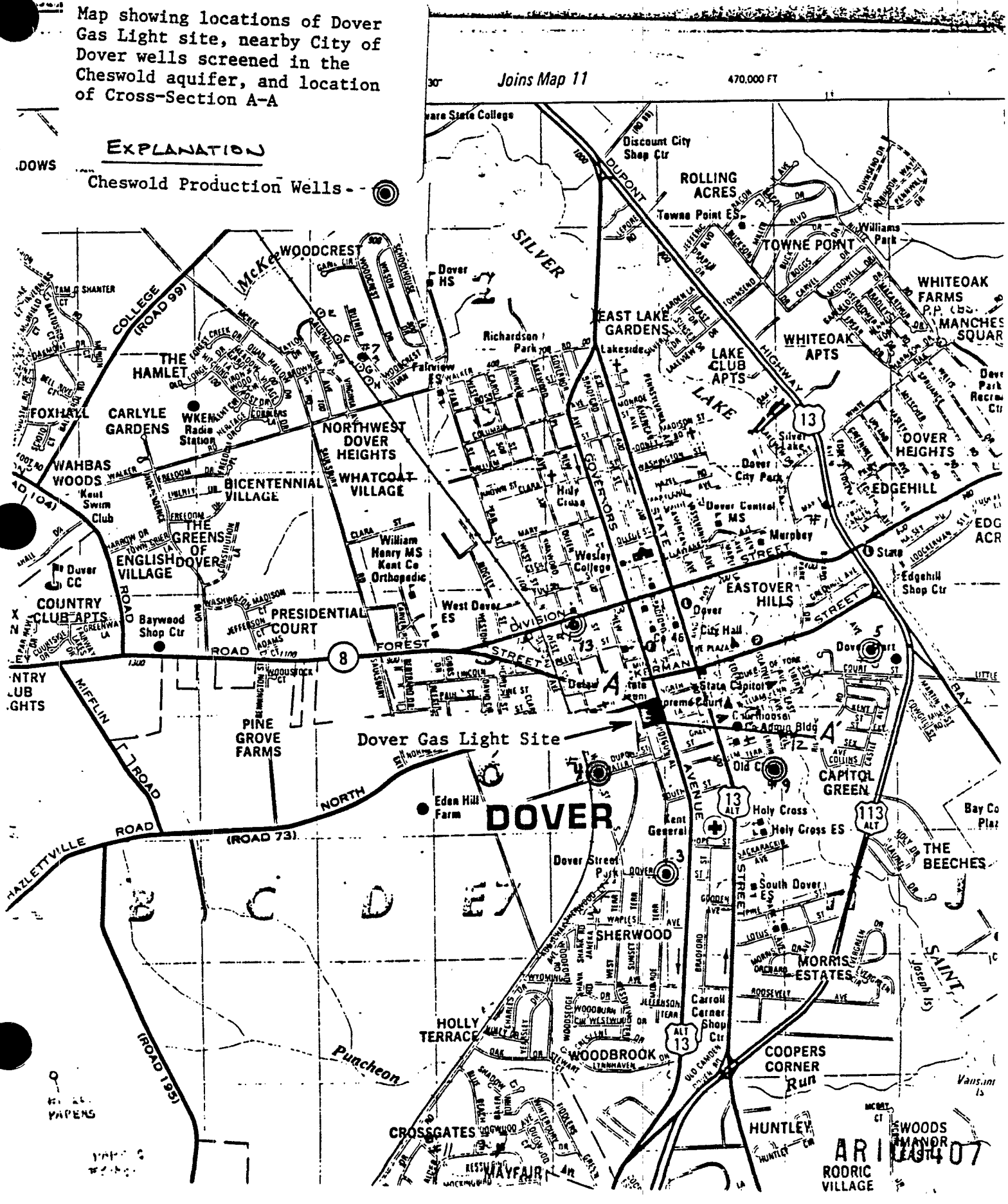
Map showing locations of Dover Gas Light site, nearby City of Dover wells screened in the Cheswold aquifer, and location of Cross-Section A-A

EXPLANATION

Cheswold Production Wells



ORIGINAL (Red)

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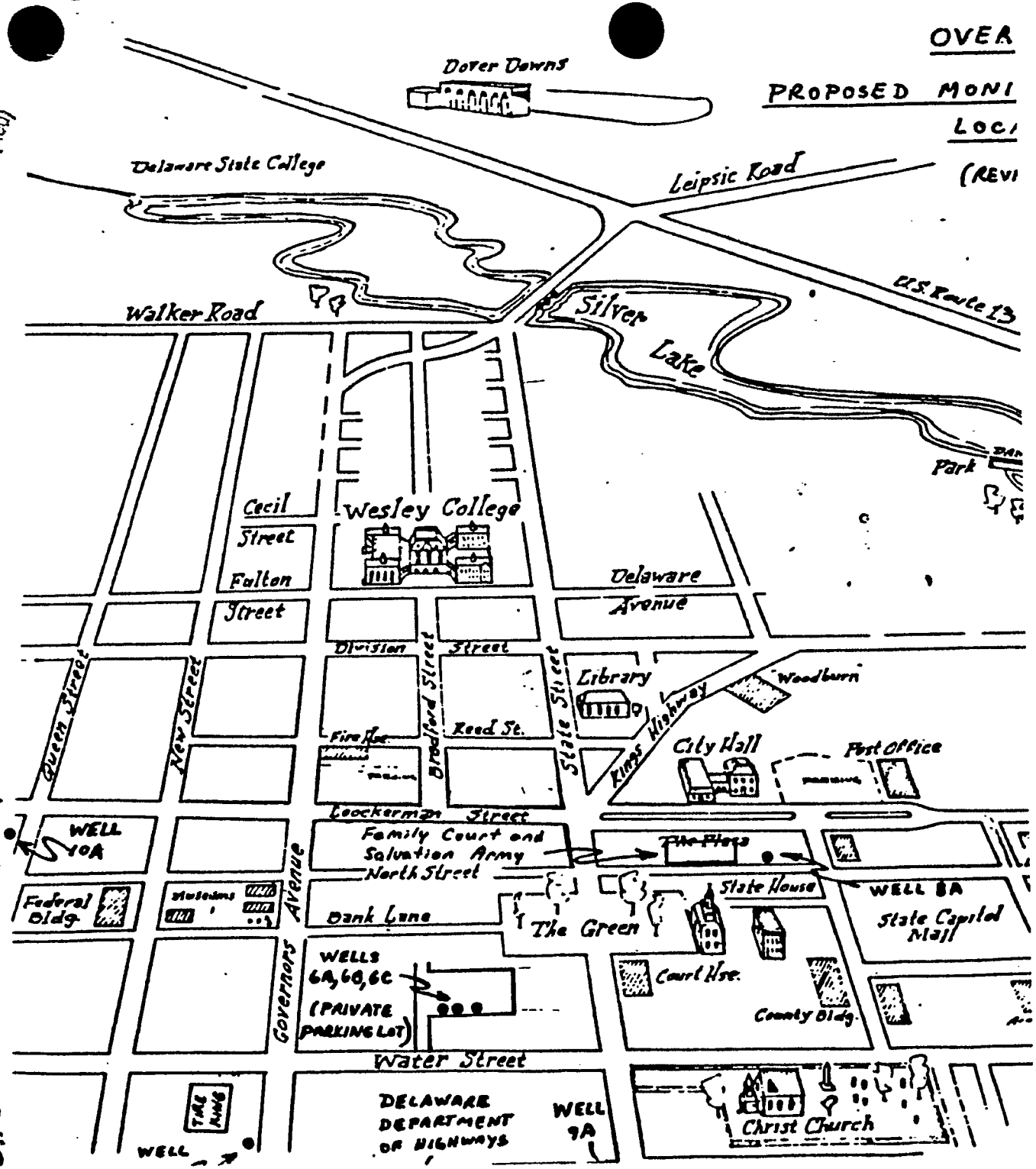

AR100408

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401
(301) 266-9180

ORIGINAL (Red)

DATE : January 10, 1989

SUBJECT: GC/MS Analysis of Samples from **Dover Gas and Light Company**
Superfund-Enforcement, (12/8/88 - 12/27/88), 881206-16 - 18

FROM : Joseph L. Slayton JS
Chemist

Susan Warner SW
Environmental Scientist

TO : Daniel K. Donnelly
Chief, Laboratory Section

THRU : John Austin JA
Team Leader, Organic Analysis Section

The samples were examined for the presence of organic compounds listed as extractable Priority Pollutant and CLP Hazardous Substances List Compounds, using fused silica capillary column/gas chromatography/mass spectrometry. Concentrations of these compounds were determined using the relative response of authentic standards to the closest internal standard. These values have been reported in the Extractable Organics Analysis Target Compound Data Sheet. Only those for which results are reported were detected. Sample target compound values less than the quantitation limit were labeled with a J. This indicates that the mass spectra obtained for the sample met the identification criteria, yet the quantity present was below the level for which the instrument accurately quantitates. These results (J) should be considered estimated quantities. The NQL (nominal quantitation limit) listed in the Target Compound Data Sheet is the quantitation limit that has been determined for this method. The actual quantitation limit for a sample reflects the NQL as well as any dilution/concentration factor specific for each sample.

The samples were also examined for the presence of compounds in addition to those on the Target Compound list. Authentic standards were not available to verify these results. Tentative identification of these compounds was made on the comparison of sample spectra to the EPA/NIH Mass Spectral Library. Concentrations for these compounds were estimated based on the response of the closest internal standard and the assumption that the instrument response for a given tentative compound was the same as the instrument response for the internal standards. These identifications have been reported as tentative identifications with the associated quantitation values reported as estimated concentrations.

The samples were extracted by a contractor, Environmental Services Assistance Team (ESAT). All GC/MS analyses and data workup were performed by EPA personnel.

JS/SW:ad

cc: Peggy Zawodny PZ
QCO

GC/MS Analysis of Samples from Dover Gas and Light Company
Superfund-Enforcement, 881206-16 - 18

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Sample Description:

Lab No.	Description
881206-16	Dover Gas and Light Company, Blank
-17	Dover Gas and Light Company, Well #9 — pH 7.60
-18	Dover Gas and Light Company, Well #4 — pH 7.85

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Quality Control:

Before acquisition of any sample data, the mass spectrometer is calibrated using FC43. The calibration is verified by obtaining the spectrum of a known compound (DFTPP). All mass assignments and relative abundances are found to be in acceptable ranges or the instrument is adjusted until an acceptable spectrum of the known is obtained.

Immediately before analysis, each sample is spiked with an internal standard mix containing D_4-1,4-dichlorobenzene; D_8-naphthalene; D_{10}-acenaphthene; D_{10}-phenanthrene, D_{12}-chrysene and D_{12}-perylene. All quantitation or estimates of concentration are made in comparison to the internal standard nearest the compound of interest.

Mixed standards of extractable priority pollutants and CLP Hazardous Substances List Compounds are analyzed before each group of samples. These standards are obtained from the EPA Quality Assurance Materials Bank in Research Triangle Park, N.C. The relative response of each compound versus the internal standard is determined for use in quantitation.

For each group of samples extracted, a method blank is prepared and examined for laboratory introduced contamination. All sample extracts have been corrected for any blank contamination.

The samples were spiked with a mixture of surrogate compounds prior to extraction. Recovery for each was determined to check for matrix effect. Aliquots of samples 881206-17 and 881206-18 were spiked with a priority pollutant cocktail at 50 ng/uL (in the extract) and carried through the extraction and GC/MS analysis. The recovery for each compound was determined to check for matrix effect. Aliquots of different samples were spiked since there was not enough sample submitted to extract a matrix spike and a matrix spike duplicate on the same sample.

Region III
Central Regional Laboratory

ORIGINAL (Red)

Extractable Organics Analysis Target Compound Data Sheet

Sample No. 881206-16

Date Sampled: 12-5-88
Date Extracted: 12-8-88
Date Analyzed: 12-20-88

Units: (Water = ug/L)
Soil = mg/kg (wet)

Semivolatile Compounds

Actual Quantitation Limit = (/.0) x NQL

NQL	CAS Number		
10	62-75-8	N-Nitrosodimethylamine	
10	108-95-2	Phenol	
10	62-53-34	Aniline HSL	
10	111-44-4	bis(2-Chloroethyl)Ether	
10	95-57-8	2-Chlorophenol	
10	541-73-1	1,3-Dichlorobenzene	
10	106-46-7	1,4-Dichlorobenzene	
10	100-51-6	Benzyl Alcohol HSL	
10	95-50-1	1,2-Dichlorobenzene	
10	95-48-7	2-Methylphenol HSL	
10	39638-32-9	bis(2-chloroisopropyl)Ether	
10	106-44-5	4-Methylphenol HSL	
10	621-64-7	N-Nitroso-di-n-Propylamine	
10	67-72-1	Hexachloroethane	
10	98-95-3	Nitrobenzene	
10	78-59-1	Isophorone	
10	88-75-5	2-Nitrophenol	
10	105-67-9	2,4-Dimethylphenol	
50	65-85-0	Benzoic Acid HSL	
10	111-91-1	bis(2-Chloroethoxy)Methane	
10	120-83-2	2,4-Dichlorophenol	
10	120-82-1	1,2,4-Trichlorobenzene	
10	91-20-3	Naphthalene	
	106-47-8	4-Chloroaniline HSL	
	87-68-3	Hexachlorobutadiene	
10	59-50-7	4-Chloro-3-Methylphenol	
10	91-57-6	2-Methylnaphthalene HSL	
10	77-47-4	Hexachlorocyclopentadiene	
10	88-06-2	2,4,6-Trichlorophenol	
50	95-95-4	2,4,5-Trichlorophenol HSL	
10	91-58-7	2-Chloronaphthalene	
50	88-74-4	2-Nitroaniline HSL	
10	131-11-3	Dimethylphthalate	
10	208-96-8	Acenaphthylene	

NQL	CAS Number		
50	99-09-2	3-Nitroaniline HSL	
10	83-32-9	Acenaphthene	
50	51-28-5	2,4-Dinitrophenol	
50	100-02-7	4-Nitrophenol	
10	132-64-9	Dibenzofuran HSL	
10	606-20-2	2,6-Dinitrotoluene	
10	121-14-2	2,4-Dinitrotoluene	
10	84-66-2	Diethylphthalate	
10	7005-72-3	4-Chlorophenylphenylether	
10	86-73-7	Fluorene	
50	100-01-6	4-Nitroaniline HSL	
10	86-30-6	N-Nitrosodiphenylamine(1)	
50	543-52-1	4,6-Dinitro-2-Methylphenol	
10	101-55-3	4-Bromophenyl-phenylether	
10	118-74-1	Hexachlorobenzene	
50	87-86-5	Pentachlorophenol	
10	85-01-8	Phenanthrene	
10	120-12-7	Anthracene	
10	84-74-2	Di-n-Butylphthalate	*
10	206-44-0	Fluoranthene	
50	92-87-5	Benzidine	
10	129-00-0	Pyrene	
10	85-68-7	Butylbenzylphthalate	
20	91-94-1	3,3'-Dichlorobenzidine	
10	56-55-3	Benzo(a)Anthracene	
10	117-81-7	bis(2-Ethylhexyl)Phthalate	*
10	218-01-9	Chrysene	
10	117-84-0	Di-n-Octylphthalate	
10	205-99-2	Benzo(b)Fluoranthene	
10	207-08-9	Benzo(k)Fluoranthene	
10	50-32-8	Benzo(a)Pyrene	
10	193-39-5	Indeno(1,2,3-cd)Pyrene	
10	53-70-3	Dibenzo(a,h)Anthracene	
10	191-24-2	Benzo(g,h,i)Perylene	

NQL = Nominal Quantitation Limit
J = Estimated quantity, concentration below the level for accurate quantitation.

*Not detected after correction for laboratory blank.
HSL = CLP Hazardous Substance List Compo
(1) = Can not be separated from diphenylamine

AR100412

Region III
Central Regional Laboratory

ORIGINAL (Red)

Extractable Organics Analysis Target Compound Data Sheet

Sample No. 881206-17

Date Sampled: 12-6-88
Date Extracted: 12-8-88
Date Analyzed: 12-20-88

Units: (Water = ug/L)
Soil = mg/kg (wet)

Semivolatile Compounds

Actual Quantitation Limit = (1.04) x NQL

NQL	CAS Number		
10	62-75-8	N-Nitrosodimethylamine	
10	108-95-2	Phenol	
10	62-53-34	Aniline HSL	
10	111-44-4	bis(2-Chloroethyl)Ether	
10	95-57-8	2-Chlorophenol	
10	541-73-1	1,3-Dichlorobenzene	
10	106-46-7	1,4-Dichlorobenzene	
10	100-51-6	Benzyl Alcohol HSL	
10	95-50-1	1,2-Dichlorobenzene	
10	95-48-7	2-Methylphenol HSL	
10	638-32-9	bis(2-chloroisopropyl)Ether	
10	6-44-5	4-Methylphenol HSL	
10	621-64-7	N-Nitroso-di-n-Propylamine	
10	67-72-1	Hexachloroethane	
10	98-95-3	Nitrobenzene	
10	78-59-1	Isophorone	
10	88-75-5	2-Nitrophenol	
10	105-67-9	2,4-Dimethylphenol	
50	65-85-0	Benzoic Acid HSL	
10	111-91-1	bis(2-Chloroethoxy)Methane	
10	120-83-2	2,4-Dichlorophenol	
10	120-82-1	1,2,4-Trichlorobenzene	
10	91-20-3	Naphthalene	
10	106-47-8	4-Chloroaniline HSL	
10	87-68-3	Hexachlorobutadiene	
10	59-50-7	4-Chloro-3-Methylphenol	
10	91-57-6	2-Methylnaphthalene HSL	
10	77-47-4	Hexachlorocyclopentadiene	
10	88-06-2	2,4,6-Trichlorophenol	
50	95-95-4	2,4,5-Trichlorophenol HSL	
10	91-58-7	2-Chloronaphthalene	
50	88-74-4	2-Nitroaniline HSL	
10	131-11-3	Dimethylphthalate	
10	208-96-8	Acenaphthylene	

NQL	CAS Number		
50	99-09-2	3-Nitroaniline HSL	
10	83-32-9	Acenaphthene	
50	51-28-5	2,4-Dinitrophenol	
50	100-02-7	4-Nitrophenol	
10	132-64-9	Dibenzofuran HSL	
10	606-20-2	2,6-Dinitrotoluene	
10	121-14-2	2,4-Dinitrotoluene	
10	84-66-2	Diethylphthalate	
10	7005-72-3	4-Chlorophenylphenylether	
10	86-73-7	Fluorene	
50	100-01-6	4-Nitroaniline HSL	
10	86-30-6	N-Nitrosodiphenylamine(1)	
50	543-52-1	4,6-Dinitro-2-Methylphenol	
10	101-55-3	4-Bromophenyl-phenylether	
10	118-74-1	Hexachlorobenzene	
50	87-86-5	Pentachlorophenol	
10	85-01-8	Phenanthrene	
10	120-12-7	Anthracene	
10	84-74-2	Di-n-Butylphthalate	*
10	206-44-0	Fluoranthene	
50	92-87-5	Benzidine	
10	129-00-0	Pyrene	
10	85-68-7	Butylbenzylphthalate	
20	91-94-1	3,3'-Dichlorobenzidine	
10	56-55-3	Benzo(a)Anthracene	
10	117-81-7	bis(2-Ethylhexyl)Phthalate	*
10	218-01-9	Chrysene	
10	117-84-0	Di-n-Octylphthalate	*
10	205-99-2	Benzo(b)Fluoranthene	
10	207-08-9	Benzo(k)Fluoranthene	
10	50-32-8	Benzo(a)Pyrene	
10	193-39-5	Indeno(1,2,3-cd)Pyrene	
10	53-70-3	Dibenzo(a,h)Anthracene	
10	191-24-2	Benzo(g,h,i)Perylene	

NQL = Nominal Quantitation Limit
= Estimated quantity, concentration below the level for accurate quantitation.

*Not detected after correction for laboratory blank.
HSL = CLP Hazardous Substance List Compounds
(1) = Can not be separated from diphenylamine

Region III
Central Regional Laboratory

Extractable Organics Analysis Target Compound Data Sheet

Sample No. 881206-18

Date Sampled: 12-6-88
Date Extracted: 12-8-88
Date Analyzed: 12-20-88

Units: (Water = ug/L)
Soil = mg/kg (wet)

Semivolatile Compounds

Actual Quantitation Limit = (1.04) x NQL

NQL	CAS Number		
10	62-75-8	N-Nitrosodimethylamine	
10	108-95-2	Phenol	
10	62-53-34	Aniline HSL	
10	111-44-4	bis(2-Chloroethyl)Ether	
10	95-57-8	2-Chlorophenol	
10	541-73-1	1,3-Dichlorobenzene	
10	106-46-7	1,4-Dichlorobenzene	
10	100-51-6	Benzyl Alcohol HSL	
10	95-50-1	1,2-Dichlorobenzene	
10	95-48-7	2-Methylphenol HSL	
10	39638-32-9	bis(2-chloroisopropyl)Ether	
10	106-44-5	4-Methylphenol HSL	
10	621-64-7	N-Nitroso-di-n-Propylamine	
10	67-72-1	Hexachloroethane	
10	98-95-3	Nitrobenzene	
10	78-59-1	Isophorone	
10	88-75-5	2-Nitrophenol	
10	105-67-9	2,4-Dimethylphenol	
10	65-85-0	Benzoic Acid HSL	
10	111-91-1	bis(2-Chloroethoxy)Methane	
10	120-83-2	2,4-Dichlorophenol	
10	120-82-1	1,2,4-Trichlorobenzene	
10	91-20-3	Naphthalene	
10	106-47-8	4-Chloroaniline HSL	
10	87-68-3	Hexachlorobutadiene	
J	59-50-7	4-Chloro-3-Methylphenol	
10	91-57-6	2-Methylnaphthalene HSL	
10	77-47-4	Hexachlorocyclopentadiene	
10	88-06-2	2,4,6-Trichlorophenol	
10	95-95-4	2,4,5-Trichlorophenol HSL	
10	91-58-7	2-Chloronaphthalene	
10	88-74-4	2-Nitroaniline HSL	
10	131-11-3	Dimethylphthalate	
10	208-96-8	Acenaphthylene	

NQL	CAS Number		
50	99-09-2	3-Nitroaniline HSL	
10	83-32-9	Acenaphthene	
50	51-28-5	2,4-Dinitrophenol	
50	100-02-7	4-Nitrophenol	
10	132-64-9	Dibenzofuran HSL	
10	606-20-2	2,6-Dinitrotoluene	
10	121-14-2	2,4-Dinitrotoluene	
10	84-66-2	Diethylphthalate	
10	7005-72-3	4-Chlorophenylphenylether	
10	86-73-7	Fluorene	
50	100-01-6	4-Nitroaniline HSL	
10	86-30-6	N-Nitrosodiphenylamine(1)	
50	543-52-1	4,6-Dinitro-2-Methylphenol	
10	101-55-3	4-Bromophenyl-phenylether	
10	118-74-1	Hexachlorobenzene	
50	87-86-5	Pentachlorophenol	
10	85-01-8	Phenanthrene	
10	120-12-7	Anthracene	
10	84-74-2	Di-n-Butylphthalate	*
10	206-44-0	Fluoranthene	
50	92-87-5	Benzidine	
10	129-00-0	Pyrene	
10	85-68-7	Butylbenzylphthalate	
20	91-94-1	3,3'-Dichlorobenzidine	
10	56-55-3	Benzo(a)Anthracene	
10	117-81-7	bis(2-Ethylhexyl)Phthalate	*
10	218-01-9	Chrysene	
10	117-84-0	Di-n-Octylphthalate	
10	205-99-2	Benzo(b)Fluoranthene	
10	207-08-9	Benzo(k)Fluoranthene	
10	50-32-8	Benzo(a)Pyrene	
10	193-39-5	Indeno(1,2,3-cd)Pyrene	
10	53-70-3	Dibenzo(a,h)Anthracene	
10	191-24-2	Benzo(g,h,i)Perylene	

NQL = Nominal Quantitation Limit
J = Estimated quantity, concentration below the level for accurate quantitation.

*Not detected after correction for laboratory blank.
HSL = CLP Hazardous Substance List Compound
(1) = Can not be separated from diphenylamine

SAMPLE ID. 88120616

ORIGINAL (Red)

WATER: COMBINED ACID & BASE NEUTRAL EXTRACT

ORGINAL SAMPLE VOLUME (ML) 1000.0
FINAL EXT. VOLUME (ML) 1.0
EXT. DILUTION FACTOR 1.000
DETECTION LIMIT 1.000 PPB, ASSUMING 1NG/UL D.L. IN EXTRACT
CONC. OF INT. STDS. (NG/UL) 40.

OTHER COMPOUNDS

SCAN NO.	TENTATIVE ID. / CAS NO.	STD.	AREA	EST. CONC. PPB

NONE DETECTED

****

ORIGINAL (Red)

TENTATIVE IDENTFICATIONS HAVE BEEN MADE USING
THE EPA/NIH MASS SPECTRAL DATA BASE. AUTHENTIC STANDARDS
WERE NOT AVAILABLE.
INTERNAL STANDARDS ARE ADDED FOR QUANTITATION.
SURROGATE STANDARDS ARE ADDED PRIOR TO EXTRACTION
TO TEST FOR MATRIX INTERFERENCES.
THE CAS NO. IS THE CHEMICAL ABSTRACT SERVICE
REGISTRY NUMBER.
TRACE REPORTED NEXT TO A VALUE IS A FLAG TO
EMPHASIZE VERY LOW LEVEL RESULTS (BELOW 1 NG/UL
IN THE EXTRACT).

****

SAMPLE ID. 88120617

ORIGINAL (Red)

WATER: COMBINED ACID & BASE NEUTRAL EXTRACT

ORGINAL SAMPLE VOLUME (ML) 960.0
FINAL EXT. VOLUME (ML) 1.0
EXT. DILUTION FACTOR 1.000
DETECTION LIMIT 1.042 PPB, ASSUMING 1NG/UL D.L. IN EXTRACT
CONC. OF INT. STDS. (NG/UL) 40.

OTHER COMPOUNDS

SCAN NO.	TENTATIVE ID. / CAS NO.	STD.	AREA	EST. CONC. PPB

NONE DETECTED

ORIGINAL (Red)

SAMPLE ID. 88120618

WATER: COMBINED ACID & BASE NEUTRAL EXTRACT

ORGINAL SAMPLE VOLUME (ML) 960.0
FINAL EXT. VOLUME (ML) 1.0
EXT. DILUTION FACTOR 1.000
DETECTION LIMIT 1.042 PPB, ASSUMING 1NG/UL D.L. IN EXTRACT
CONC. OF INT. STDS. (NG/UL) 40.

OTHER COMPOUNDS

SCAN NO.	TENTATIVE ID. / CAS NO.	STD.	AREA	EST. CONC. PPB

NONE DETECTED

ORIGINAL (Red)

SURROGATE AQC (WATER)

% RECOVERY

SAMPLE	2-FLUORO-PHENOL	D5-PHENOL	D5-NITRO-BENZENE	2-FLUORO-1,1'-BI-PHENYL	2,4,6-TRI-BROMO-PHENOL	D14-TER-PHENYL
CLP TARGET LIMITS	(21-100)	(10-94)	(35-114)	(43-116)	(10-123)	(33-141)
BK1206	51.5	29.4	95.9	87.8	109.6	81.3
BB120617	39.2	24.9	105.4	98.3	108.7	67.4
88120616	46.5	25.6	80.3	69.8	97.9	89.1
88120618	44.2	25.8	69.0	57.5	91.4	82.8

ORIGINAL (Red)

MATRIX SPIKE RECOVERY

COMPOUND	881206-17MS	TARGET % WATER
PHENOL	33.5	12-89
2-CHLOROPHENOL	82.2	27-123
1,4-DICHLOROBENZENE	47.8	36-97
N-NITROSO-n-PROPYL-1-PROPANAMINE	90.5	41-116
1,2,4-TRICHLOROBENZENE	48.9	39-98
4-CHLORO-3-METHYLPHENOL	85.7	23-97
ACENAPHTHENE	75.1	46-118
4-NITROPHENOL	21.5	10-80
2,4-DINITROTOLUENE	90.4	24-96
PENTACHLOROPHENOL	63.5	9-103
DIBUTYLPHTHALATE	92.4	11-117
PYRENE	89	26-127

ORIGINAL (Red)

MATRIX SPIKE RECOVERY

COMPOUND	881206-18MS	TARGET % WATER
PHENOL	34.1	12-89
2-CHLOROPHENOL	79.1	27-123
1,4-DICHLOROBENZENE	54.3	36-97
N-NITROSO-n-PROPYL-1-PROPANAMINE	89.9	41-116
1,2,4-TRICHLOROBENZENE	57.4	39-98
4-CHLORO-3-METHYLPHENOL	86	23-97
ACENAPHTHENE	80.7	46-118
4-NITROPHENOL	25.9	10-80
2,4-DINITROTOLUENE	92.8	24-96
PENTACHLOROPHENOL	67.4	9-103
DIBUTYLPHTHALATE	90.1	11-117
PYRENE	90.3	26-127

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401
(301) 266-9180

ORIGINAL (Red)

DATE : January 5, 1989

SUBJECT: Dover Gas & Light Company: Water Samples for VOC Analysis: Superfund Enforcement: TGB03N4P1; (12/8/88-12/21/88); 881206-16-18

FROM : Ruth Lopez RL
Environmental Engineer

TO : Daniel K. Donnelly
Chief, Laboratory Section

THRU: John Austin JA
Team Leader, Organic Analysis Section

The above samples were analyzed for the presence of volatile organic compounds amenable to purge and trap and identifiable by mass spectrometry. No reportable compounds were found.

Additional QC information will be furnished upon request.

Description:

Lab #	Description
881206-16	Dover Gas & Light Co., Blank
881206-17	Dover Gas & Light Co., Well #9
881206-18	Dover Gas & Light Co., Well #4

cc: Peggy Zawodny PZ
QCO

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Standard Equatable Compound Reference List

No	Name	Normal Quantitation Limit (NQL)
1	1,4-DIFLUOROBENZENE (IS)	n/a (ug/L)
2	DICHLORODIFLUOROMETHANE	10
3	CHLOROMETHANE	10
4	VINYL CHLORIDE	10
5	BROMOMETHANE	10
6	CHLOROETHANE	10
7	TRICHLOROFLUOROMETHANE	10
8	ACETONE	10
9	1,1-DICHLOROETHYLENE	5
10	METHLYENE CHLORIDE	10
11	CARBON DISULFIDE	5
12	TRANS-1,2-DICHLOROETHYLENE	5
13	VINYL ACETATE	5
14	1,1-DICHLOROETHANE	5
15	2-BUTANONE	5
16	CIS-1,2-DICHLOROETHENE	5
17	2,2-DICHLOROPROPANE	5
18	CHLOROFORM	5
19	BROMOCHLOROMETHANE	5
20	D4-1,2-DICHLOROETHANE (SURR)	n/a
21	1,1,1-TRICHLOROETHANE	5
22	1,2-DICHLOROETHANE	5
23	1,1-DICHLORO-1-PROPENE	5
24	BENZENE	5
25	CARBON TETRACHLORIDE	5
26	1,2-DICHLOROPROPANE	10
27	TRICHLOROETHYLENE	5
28	DIBROMOMETHANE	5
29	BROMODICHLOROMETHANE	5
30	(2-CHLOROETHOXY)-ETHENE	10
31	4-METHYL-2-PENTANONE	5
32	CIS-1,3-DICHLOROPROPYLENE	5
33	TRANS-1,3-DICHLOROPROPYLENE	5
34	D5-CHLOROBENZENE (IS)	n/a
35	D8-TOLUENE (SURR)	n/a
36	TOLUENE	5
37	1,1,2-TRICHLOROETHANE	5
38	2-HEXANONE	5
39	1,3-DICHLOROPROPANE	5
40	DIBROMOCHLOROMETHANE	5
41	1,2-DIBROMOETHANE	5
42	TETRACHLOROETHYLENE	5
43	CHLOROBENZENE	5
44	1,1,1,2-TETRACHLOROETHANE	5
45	ETHYL BENZENE	5

(cont'd)

n/a = not applicable
(IS) = Internal Standard compound
(SURR) = Surrogate compound

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Standard Equatable Compound Reference List (cont'd)

ORIGINAL (Red)

No	Name	Normal Quantitation Limit (NQL)
46	M & P-XYLENE	5 * (ug/L)
47	BROMOFORM	10
48	STYRENE	5
49	O-XYLENE	5
50	1,1,2,2-TETRACHLOROETHANE	10
51	1,2,3-TRICHLOROPROPANE	5
52	ISOPROPYLBENZENE	5
53	1,4-BROMOFLUOROBENZENE (SURR)	n/a
54	D4-1,2-DICHLOROBENZENE (IS)	n/a
55	BROMOBENZENE	5
56	N-PROPYLBENZENE	5
57	2-CHLOROTOLUENE	5
58	4-CHLOROTOLUENE	5
59	1,3,5-TRIMETHYLBENZENE	5
60	TERT-BUTYLBENZENE	5
61	1,2,4-TRIMETHYLBENZENE	5
62	SEC-BUTYLBENZENE	5
63	1,3-DICHLOROBENZENE	5
64	1,4-DICHLOROBENZENE	5
65	P-ISOPROPYLTOLUENE	5
66	1,2-DICHLOROBENZENE	5
67	N-BUTYLBENZENE	5
68	1,2-DIBROMO-3-CHLOROPROPANE	5
69	1,2,4-TRICHLOROBENZENE	5
70	NAPHTHALENE	5
71	HEXACHLOROBUTADIENE	5
72	1,2,3-TRICHLOROBENZENE	5

* = calculated from m-xylene isomer
n/a = not applicable
(IS) = Internal Standard compound
(SURR) = Surrogate compound

E.P.A. Region III Central Regional Laboratory

ORIGINAL (Red)

Quality Control Report

Site: Dover Gas & Lighting
Program: Superfund-Enforcement
Date Analyzed: 12-8-88

MATRIX SPIKE RECOVERY

CAS #		Spike Level ug/L	88120618 ug/L	%R	CLP QC LIMITS
75-35-4	1,1-Dichloroethene	20	21.5	107.5	59-172
71-43-2	Benzene	20	23.3	116.5	62-137
79-01-6	Trichloroethene	20	21.7	108.5	66-142
108-88-3	Toluene	20	17.6	88	59-139
108-90-7	Chlorobenzene	20	18.1	90.5	60-133

SURROGATE RECOVERY

Dover Gas & Lighting

%R

	A	B	C	CRL LIMITS
88120616	100	100	100	80-120
88120617	110.7	111.7	99.9	80-120
88120618	105.8	141.3*	94.2	80-120
88120618S	106.7	105.7	117	80-120

A = 1,2-DICHLOROETHANE-d4
B = TOLUENE-d8
C = 1,4-BROMOFLUOROBENZENE

S = Matrix Spike
%R = Percent Recovery
* Unknown interference

AR100425

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

CHAIN OF CUSTODY RECORD

REGION 3
Curtis Bldg., 6th & Walnut Sts.
Philadelphia, Pennsylvania 19106

PROJ. NO.

PROJECT NAME: DOVER GAS & LIGHT Co

SAMPLERS: (Signature) Gerard R Donovan Jr

STA. NO.	DATE 1988	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	BENZENE (VOA)	TOLUENE (VOA)	XYLENE (VOA)	ANTHRACENE (EXT)	NAPHTHALENE (EXT)		REMARKS
	12/5	1415		/	BLANK	1				/	/		3-16070
	12/5	1415		/	BLANK	3	/	/	/				3-16068, 3-16069, 3-16071
	12/6	1025		/	WELL # 9	1				/	/		3-16072
	12/6	1025		/	WELL # 9	3	/	/	/				3-16073, 3-16074
	12/6	1110		/	WELL # 4	1				/	/		3-16076
	12/6	1110		/	WELL # 4	3	/	/	/				3-16078, 3-16079

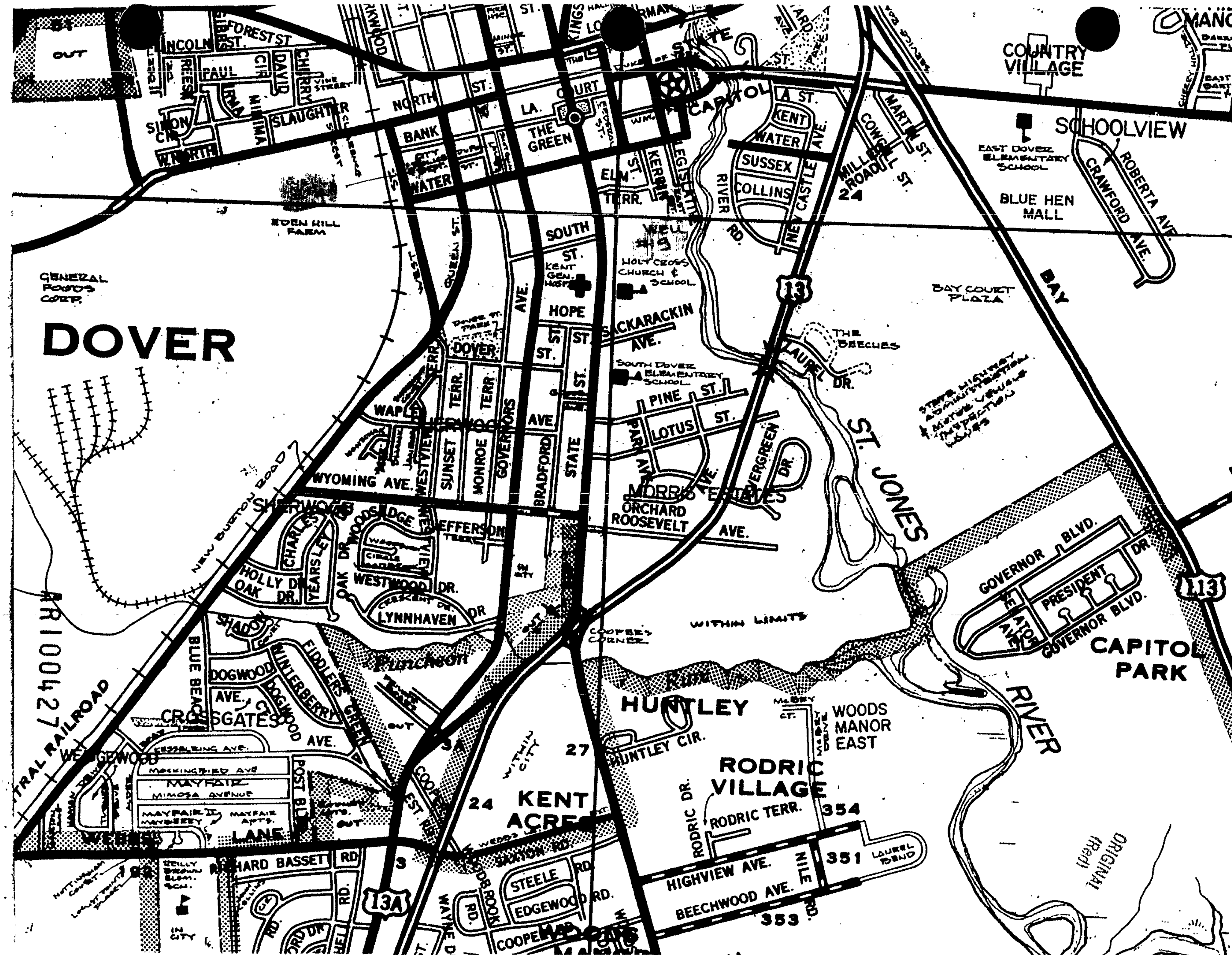
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
GR Donovan Jr	12/6/88 1525				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		Janet Robinson	12-6-88 1525		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

ORIGINAL

AR10U426

20455



DOVER
ST. JONES
RIVER
CAPITOL PARK
HUNTLEY
RODRIC VILLAGE
KENT ACRES
COUNTRY VILLAGE
SCHOOLVIEW
BLUE HEN MALL
BAY COURT PLAZA
WOODS MANOR EAST
ORIGINAL (Red)
EAST DOVER ELEMENTARY SCHOOL
SOUTH DOVER ELEMENTARY SCHOOL
HOLY CROSS CHURCH & SCHOOL
GENERAL FOODS CORP.
EDEN HILL FARM
THE BEECHES
WITHIN LIMITS
COOPER'S CORNER
BAY
ROBERTA AVE.
CRAWFORD AVE.
MARTIN ST.
GOVERNOR BLVD.
PRESIDENT DR.
RIVER RD.
SUSSEX
COLLINS
KENT
WATER
NEW CASTLE AVE.
SOUTH ST.
HOPE ST.
SACKARACKIN AVE.
PINE ST.
LOTUS ST.
PARK AVE.
EVERGREEN DR.
ORCHARD
ROOSEVELT AVE.
STATE
BRADFORD
GOVERNORS AVE.
MONROE TERR.
SUNSET TERR.
WESTVIEW
WYOMING AVE.
JEFFERSON TERR.
WESTWOOD DR.
LYNNHAVEN DR.
HOLLY DR.
OAK DR.
YEARSLEY
CHARLES
FIDDLERS GREEN
WINTERBERRY
DOGWOOD AVE.
CROSSGATES
BLUE BEACH
POST BLVD.
MAYFAIR
MIMOSA AVENUE
LANE
RICHARD BASSET RD.
HIGHVIEW AVE.
BEECHWOOD AVE.
NILE RD.
RODRIC TERR.
RODRIC DR.
HUNTLEY CIR.
LAUREL BEND
STEELE
EDGEWOOD RD.
SAXTON RD.
NORTH
BANK
THE GREEN
LA.
COURT
ELM TERR.
QUEEN ST.
WEST ST.
NEW BURTON ROAD
SLAUGHTER
LINCOLN ST.
FOREST ST.
PAUL
DAVID
CHERRY
CENTRAL RAILROAD
13
113
13A
24
27
351
353
354
AR100427

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ORIGINAL (Red)

Sampling at Dover Gas & Light Co. NPL Site
Dover, Delaware

Leonard Nash
Enforcement Project Manager
DELMARVA/DC/WV CERCLA
Remedial Enforcement Section (3HW16)

Robert G. Kramer, Chief
Environmental Management Branch (3ES10)
Environmental Services Division

Thru Laura A. Boornazian, Chief
DELMARVA/DC/WV CERCLA
Remedial Enforcement Section (3HW16)

The Dover Gas Light Company hazardous waste site (DGL) is located in the city of Dover. There are 14 municipal supply wells located within one mile of the site; the nearest being only 1000 feet from the site boundary. The groundwater sampling at monitoring wells showed contamination by a number of priority pollutants. The sampling was done in 1984 and the nearest municipal well should be sampled to determine if the contaminants have migrated into the well through the groundwater. The background and the sampling requirements are summarized in the following paragraphs.

The Dover Gas Light Company was a coal gasification plant which operated from 1859 until 1948. Upon closure, the plant structures were demolished and buried on site. Test borings for construction on the site encountered tarry substances. The site inspection monitoring wells revealed coal gasification pryrolysis products including the following contaminants:

Benzene
Toluene
Xylene
Anthrocene
Napthalene

3HW16:Nash:ms:08/02/88:0978

CONCURRENCES

SYMBOL	3HW16							
SURNAME	Nash							
DATE	8/3/88							

AR100428

EPA Form 1320-1 (12-70)

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